

Work Order ID 82546

Monday, April 02, 2012 3:43:34 PM

82546April 13th Page 1

Item ID: D3697-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Tube Assembly

Start Date: 4/2/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 4/17/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Run Start

NR1

Approvals:

Process Plan: *P* Date: 12-01-2

Tooling:

Date:

Stop

NR2QC: Date: SPC (Y/N): Date: Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3697

Rev B

130

0.00

130

Large Fab

Large Fab

Memo

0.00

Large Fab

1- cut at 72.00" as per dwg D3697

2- form and trim tube as per dwg D3697 using DT90033-deburr

3-weld D3697-3/-4 and D3797-1 on tube D3697-1 as per dwg D3697 using DT9003 welding jig

4-drill holes in tube in 5 pls as per dwg D3697

12-4-4 (X1)
X1 X1P10

140

QC9- Inspect visual per QSI004- Fusion Welds

0.00

140

QC

Memo

0.00

Quality Control

12-04-041 0 12-04-05

| W/O: 82546 | | WORK ORDER CHANGES | | | | | |
|------------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: D3697-041 PAR #: _____ Fault Category: Large FAB NCR: Yes No DQA: OK Date: 12/04/14
12-1342 Resolution: Scrap Disposition: Scrap QA: N/C Closed: OK Date: 12/4/16

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) 350.58 | | | | | | |
|-----------------|-------------|---|-----------------------------|---|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| <u>12/04/14</u> | <u>#100</u> | <u>During Assembly welder Bent QM #1 length out of tol. R.C. operator error</u> | <u>AS2012</u> | <u>Scrap & Destroy + Repair QM #1 in 119160</u> | <u>12-4-5</u> | <u>OK 12/04/15</u> | <u>AS2012</u> | <u>OK 12/04/15</u> |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 82546***82546***

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Monday, April 02, 2012 3:43:34 PM

Item ID: D3697-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Tube Assembly
Start Date: 4/2/2012 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 4/17/2012 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|-------------------------|
| 150 *150* QC Quality Control | QC5- Inspect part completeness to step on W/O Memo | 0.00 0.00 | | | | | | | <i>8/2/12</i> |
| 160 *160* HandFinish Hand Finishing | Chemical Conversion Coat per QSI005 4.1 Memo | 0.00 0.00 | | | | | | | <i>1 BLD-H-S</i> |
| 170 *170* QC Quality Control | QC3- Inspect Part Finish Memo | 0.00 0.00 | | | | | | | <i>1Xp m-l 12/04/05</i> |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

Monday, April 02, 2012 3:43:34 PM

Item ID: D3697-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop *NS2*

Item Name: Tube Assembly

Start Date: 4/2/2012 **Start Qty:** 1.00

*** 1 ***

Cust Item ID:

Required Date: 4/17/2012 Req'd Qty: 1.00

*** 1 ***

Customer:

Reference:

Run Start *NR1*

Approvals: _____ **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop ***NR2***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation Description

Set Up/ Run Hours

| Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---------|--------|-----------|------------|------------|---------------|-------------|
|---------|--------|-----------|------------|------------|---------------|-------------|

180

Identify as per dwg & Stock Location: ST 241A 0.00

180

Packaging

Memo

0.00

Packaging

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

12 | 4 | 10 ~~9~~

012-04-10

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

Picklist Print

Monday, April 02, 2012 3:43:37 PM

Page 1

Work Order ID: 82546

82546

Parent Item: D3697-041

D3697-041

Parent Item Name: Tube Assembly

Start Date: 4/2/2012

Required Date: 4/17/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-04-25 new issue DD verified by:EC
IPP Rev:B 08-07-14 revB as per dwg DD verified by:ec

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

| | | | | | | | | | | | | | |
|---------|--|--------------|----|--|--|-----|------|--------|---|---|--|--|--|
| D3697-3 | | Manufactured | No | | | 130 | Each | 5.0000 | 1 | 1 | | | |
|---------|--|--------------|----|--|--|-----|------|--------|---|---|--|--|--|

D3697-3

Support Plate, LH

Location

Loc Qty

Loc Code

WA023

5

50386

5

| | | | | | | | | | | | | | |
|---------|--|--------------|----|--|--|-----|------|--------|---|---|--|--|--|
| D3697-4 | | Manufactured | No | | | 130 | Each | 5.0000 | 1 | 1 | | | |
|---------|--|--------------|----|--|--|-----|------|--------|---|---|--|--|--|

D3697-4

Support Plate, RH

Location

Loc Qty

Loc Code

WA023

5

59681

5

| | | | | | | | | | | | | | |
|---------|--|--------------|----|--|--|-----|------|--------|---|---|--|--|--|
| D3797-1 | | Manufactured | No | | | 130 | Each | 4.0000 | 1 | 1 | | | |
|---------|--|--------------|----|--|--|-----|------|--------|---|---|--|--|--|

D3797-1

Ground Plate

Location

Loc Qty

Loc Code

ST241A

4

74313

4

| | | | | | | | | | | | | | |
|--------------------|--|-----------|----|--|--|-----|---|---------|---|----------|--|--|--|
| M6061T6T0.375W.049 | | Purchased | No | | | 130 | f | 72.0000 | 6 | 6.315789 | | | |
|--------------------|--|-----------|----|--|--|-----|---|---------|---|----------|--|--|--|

M6061T6T0.375W.049

6061-T6 RD Tube .375 x.049W

Location

Loc Qty

Loc Code

MAT014

72

109000

12

116720

12

119160

48

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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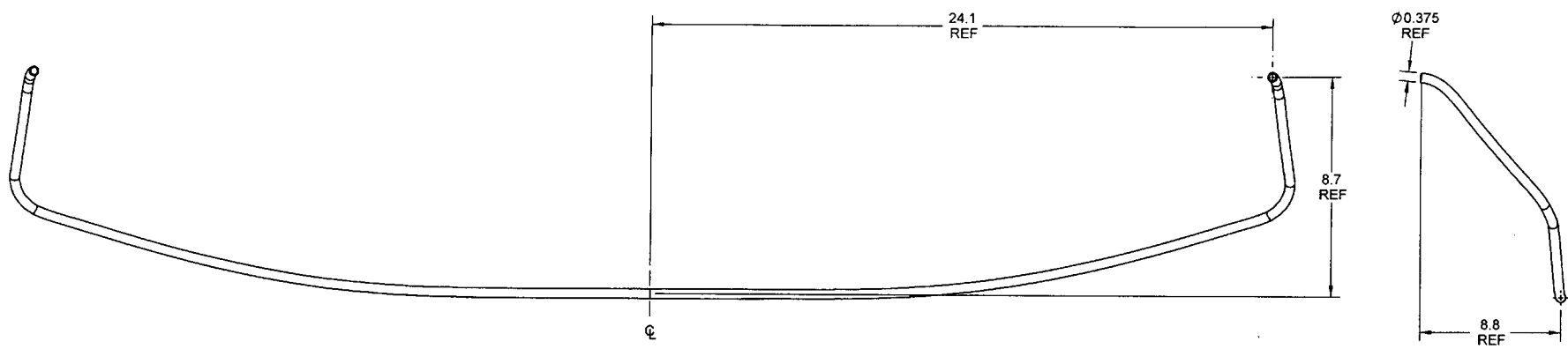
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

82546



D3697-1 TUBING

RELEASED
08.06.02

NOTES:

- 1) MATERIAL: 6061-T6 OR 6061-T62 (WW-T-700/6) ALUMINUM TUBING $\phi 0.375 \times 0.049$ WALL (REF. DART SPEC. M6061T6T0.375W0.049)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.26 lb
- 8) FABRICATE USING TEMPLATE DT9003

| | | | |
|------------|----------|--|--------------|
| DESIGN | RF | DART AEROSPACE LTD | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | RF | DRAWING NO. | REV. B |
| MFG. APPR. | RF | D3697 | SHEET 2 OF 3 |
| APPROVED | RF | TITLE | SCALE |
| DE APPR. | RF | TUBE ASSEMBLY | NTS |
| DATE | 08.06.02 | COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

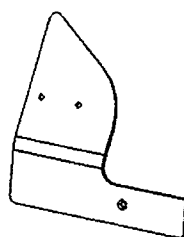
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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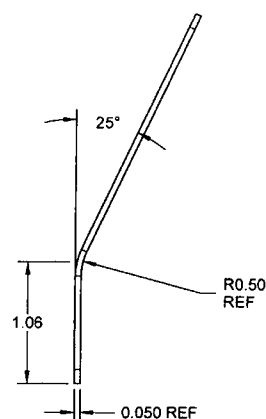
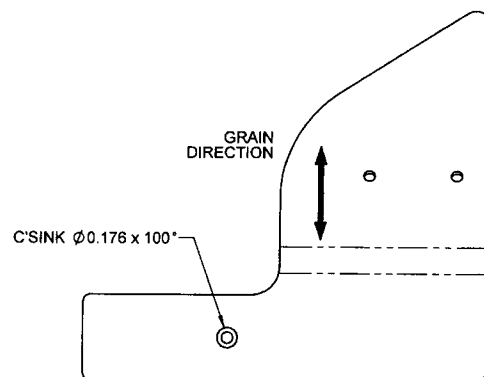
NOTE: Date & initial all entries



D3697-3 SUPPORT PLATE (LH SHOWN)



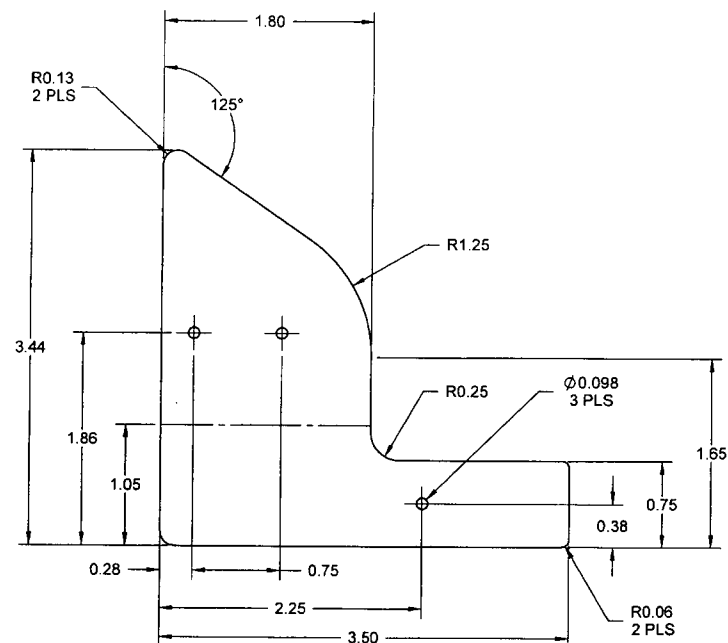
D3697-4 SUPPORT PLATE (RH SHOWN)



D3697-3 SUPPORT PLATE (LH SHOWN)
(D3697-4 SUPPORT PLATE OPPOSITE)
 (MAKE FROM D3697-3F FLAT PATTERN)

NOTES:

- 1) MATERIAL: 6061-T6 (QQ-A-250/11) SHEET 0.050 THICK (REF. DART SPEC. M6061T6S.050)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.03 lbs



D3697-3F FLAT PATTERN

RELEASED
 08-07-08

| | | | |
|------------|--------------------|--|--------------|
| DESIGN | RF | DART AEROSPACE LTD | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | <i>[Signature]</i> | DRAWING NO. | REV. B |
| MFG. APPR. | <i>[Signature]</i> | D3697 | SHEET 3 OF 3 |
| APPROVED | <i>[Signature]</i> | TITLE | SCALE |
| DE APPR. | <i>[Signature]</i> | TUBE ASSEMBLY | NTS |
| DATE | 08.06.02 | COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. | |

| W/O: | | WORK ORDER CHANGES | | | | | |
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| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries